

## Oral and Nasal Enteral Tubes: Insertion, Care, and Maintenance

Version: 4

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### 1.0 Introduction

This document has been developed to guide healthcare providers in the care and ongoing maintenance of nasogastric, orogastric, and nasojejunal tubes in a hospital setting. This document also provides a Standard Work for the insertion of [nasogastric](#) and [orogastric](#) tubes.

Enteral tubes are inserted with a medical order for various reasons, including:

- to provide nutrition for patients who are unable to feed by mouth
- for ease of administering medications
- for diagnostic purposes
- for gastric decompression and drainage

### 2.0 Definitions

**Enteral Tube:** A hollow tube that goes into the digestive tract to provide nutrition, liquids, and medications or for decompression.

**Nasogastric Tube (NG):** An enteral tube that is passed through a patient's nose, down the back of the throat, through the oesophagus and into the stomach.

**Nasojejunal Tube (NJ):** An enteral tube that is passed through a patient's nose, down the back of the throat, through the oesophagus, stomach, pyloric sphincter and passed the duodenum into the jejunum.

**Nasoduodenal Tube (ND):** An enteral tube that is passed through a patient's nose, down the back of the throat, through the oesophagus, stomach, and pyloric sphincter into the duodenum and it is not possible to advance into the jejunum.

**Orogastric Tube (OG):** An enteral tube that is passed through a patient's mouth, through the oropharynx, through the oesophagus and into the stomach.

**Nasal Bridle:** A retaining device which uses two probes with magnets at the end to pass around the vomer bone to create a loop, with a clip to secure the loop and the tube together.

### 3.0 Policy Statements

3.1 A medical order is required to insert or remove a nasally or orally inserted enteral tube. Nasal enteral tube insertion

must be avoided with trauma patients with known or suspected basal skull injury, until medically cleared.

3.2 The following must be considered contraindications to nasal enteral tube insertion.

- Suspected nasal or mid-face fractures

- Anterior basal skull fractures or surgery
- Trans-nasal or sphenoidal surgery
- Suspected foreign body aspiration
- Undiagnosed obstructive lesions of the nose
- Known severe adenoid hypertrophy

3.3 A nasally or orally inserted enteral tube will not be used unless placement can be confirmed.

3.4 When a Nasal Bridle is in use, the opening tool must accompany the patient and be available for staff use, in the event the clip must be opened.

## 4.0 Practice Guidelines and Procedures

### 4.1 Guidelines for Device Selection

- Use the smallest french size possible for feeding to prevent swallowing difficulties, to prevent complete blockage of the nares, and to decrease possibility of gastroesophageal reflux episodes.
- Use a larger french size tube for gastric draining to facilitate effective drainage and avoid tube blockage.
- Select an appropriate tube length based on the patient size and terminal point of the tube, while avoiding excessive external tube length.
- Refer to [Infant NG Size Selection Guideline](#) as a resource to guide NG selection for infants.

|                                | Silastic & Polyurethane Tubes   | Polyvinyl Chloride (PVC) Tubes  |
|--------------------------------|---|---|
| <b>Material</b>                | <ul style="list-style-type: none"> <li>• Made of soft, flexible medical grade polyurethane</li> <li>• Often with a reusable guide stylet to assist with insertion</li> <li>• Generally have a weighted tip (neonates may have non-weighted NG silastic tubes)</li> <li>• Lined with radiopaque dye to facilitate X-Ray confirmation of placement</li> </ul>   | <ul style="list-style-type: none"> <li>• Made from stiff PVC plastic</li> <li>• Radiopaque strip facilitates X-ray confirmation of placement</li> </ul>   |
| <b>Type of Use</b>             | <ul style="list-style-type: none"> <li>• Good choice for long-term use</li> <li>• Best for feeding</li> <li>• More comfortable for patient than PVC tube</li> <li>• They are not recommended to be used for gastric decompression or drainage as the tubes may collapse with negative pressure, and they have only one exit hole at the distal end</li> </ul> | <ul style="list-style-type: none"> <li>• Good choice for short-term use</li> <li>• Best for drainage and gastric decompression, but can also be used for feeding</li> <li>• They are stiffer, do not collapse and have several intake holes at the distal end</li> </ul>  |
| <b>Device Change Frequency</b> | <ul style="list-style-type: none"> <li>• Every 4 weeks</li> <li>• If there is evidence of skin irritation at any time around the nares, then the existing polyurethane tube should be removed, checked, cleaned, and reinserted</li> </ul>  | <ul style="list-style-type: none"> <li>• Every 3 days</li> <li>• Concerns of tube degeneration (as indicated by the tube becoming less flexible and brittle) when exposed to gastric contents and high pH for considerable time</li> <li>• If patient is medically unstable and changing the tube would pose a risk to the patient, consider leaving the tube up to 5 days</li> </ul> |

### 4.2 Procedures for Insertion


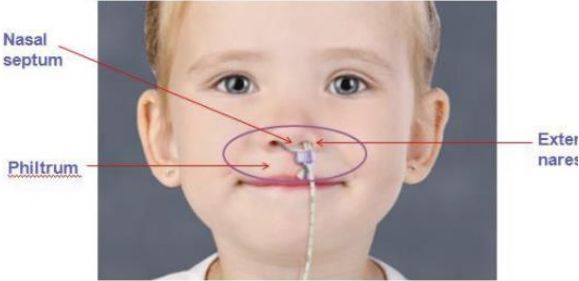
- A medical order is required for the insertion of a NG/OG/NJ.

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- NG and OG tubes can be inserted at the bedside by a healthcare provider.
- NJ Tube and Nasal Bridle insertion requires the support of Image Guided Therapy.
- If possible, the tube should be inserted in alternating nares with each change.
- **Patients who, during or after tube insertion, exhibit respiratory distress/depression, difficulty vocalizing, or hemoptysis should have their tube removed immediately.**
  - These are signs/symptoms of possible accidental insertion of the tube into the respiratory tract.

| Patient Criteria                       | Insertion Procedure  |
|--|--|
| A Patient requiring a Nasogastric Tube | <a href="#">Standard Work for Nasogastric Tube Insertion</a> |
| A Patient requiring an Orogastric Tube | <a href="#">Standard Work for Orogastric Tube Insertion</a>  |

#### 4.3 Procedures for Tube Securement

|                           | Tape  | Nasal Bridle   |
|---------------------------|---|--|
| <b>Material</b>           | <ul style="list-style-type: none"> <li>● Hypafix and Duoderm</li> </ul>   | <ul style="list-style-type: none"> <li>● Blue Bridle Monofilament tubing</li> <li>● Bridle Pro clips (5-6 Fr and 8-10 Fr clip)</li> </ul>                                  |
| <b>Indication for Use</b> | <ul style="list-style-type: none"> <li>● Standard form of device securement for NG/OG tubes</li> <li>● Used when there is low risk of tube dislodgement</li> </ul>  | <ul style="list-style-type: none"> <li>● A securement device used to prevent dislodgement of IGT inserted NJ feeding tubes to avoid repeat insertion procedures</li> </ul> |
| <b>Use</b>                | <p><b>For NG</b></p> <ul style="list-style-type: none"> <li>● Cut a piece of hypoallergenic or hydrocolloid tape to serve as a base tape placed as close to the nare as possible</li> <li>● Cut a smaller piece of tape that will fit over top of the base tape to secure the tube</li> </ul>  | <p>Refer to <a href="#">Quick Reference Guide for AMT Bridle Pro</a></p>                |

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|                                   |  |   |
|-----------------------------------|--|---|
|                                   | <p><b>For OG</b></p> <p>Cut a piece of hypoallergenic or hydrocolloid tape to serve as a base tape placed as close to the lip as possible</p> <p><b>Traditional taping</b> - Cut a smaller piece of tape that will fit over top of the base tape to secure the tube</p>  <ul style="list-style-type: none"> <li>• <b>Fish tail taping</b> - Cut a smaller piece of tape that will fit over top of the base tape with a slit at one end, crisscross the slit ends when placing for additional securement</li> </ul>  |   |
| <p><b>Frequency of Change</b></p> | <ul style="list-style-type: none"> <li>• Replace face tapes every 48 hours, or when soiled</li> <li>• Do not reinforce wet tapes – this can lead to skin breakdown</li> </ul>  | <ul style="list-style-type: none"> <li>• Every 4 weeks</li> <li>• If there is evidence of skin irritation at any time around the nare, consult with medical team</li> </ul>   |
| <p><b>Contra-indications</b></p>  | <ul style="list-style-type: none"> <li>• Patients with adhesive sensitivity skin may benefit from the use of alternative products</li> </ul>   | <ul style="list-style-type: none"> <li>• Patients with nasal airway obstructions, abnormalities, and facial and/or cranial fractures</li> <li>• Do not use on patients with thrombocytopenia or immediately post-septoplasty</li> <li>• Do not use on patients with a vomer bone graft</li> <li>• Extreme caution should be used with premature infants and neonatal patients</li> <li>• Do not use on patients who may pull on bridle to the point that it may cause serious injury</li> </ul> |

#### 4.4 Checking Placement and Patency

- **Checking placement using auscultation is NOT to be used as it is highly inaccurate.**

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- Verification of tube placement and patency must be done each time that the tube is used for feeding, medications, or diagnostic procedures, or whenever there is concern that the tube may have changed position, such as with movement, coughing, vomiting or a change in the patient's position, as any of these may alter the location of an NG/OG/NJ tube.
- Refer to [NG Tube Placement Algorithm](#) as a resource for checking placement of naso/orogastric tubes.
- Refer to [Unblocking Enteral Feeding Tubes Using Activated Pancreatic Enzymes](#) as a resource to identify when the use of pancreatic enzymes is appropriate.

|  | Naso/Orogastric  | Nasojejunal   |            |             |   |                |   |   |
|--|--|---|------------|-------------|---|----------------|---|---|
| <b>Checking Placement in a Hospital Setting</b>    | <ul style="list-style-type: none"> <li>• Refer to the <a href="#">NG Tube Placement Algorithm</a> <ul style="list-style-type: none"> <li>○ Verify tube placement by measuring gastric pH with pH test strip (Refer to <a href="#">Example of Gastric Content Images</a>)</li> <li>○ X-ray (Long Chest)</li> </ul> </li> </ul> <table border="1"> <thead> <tr> <th>pH</th> <th>Indication</th> </tr> </thead> <tbody> <tr> <td>Less than 6</td> <td>For the majority of children, pH of gastric aspirates will be less than 4.<br/>Neonates have been documented to have pH less than 5.</td> </tr> <tr> <td>Greater than 6</td> <td>Likely to have their gastric tube placed in the duodenum or respiratory system and should have their gastric tube assessed before attempting to feed. Refer to the <a href="#">NG Tube Placement Algorithm</a> and to <a href="#">Example of Gastric Content Images</a>.<br/><br/>NOTE: Some children on acid-suppressing medication, those recently fed, or being continuously fed may have a gastric pH of greater than 6.</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• If there is difficulty obtaining gastric contents, instilling additional air into the stomach may move the tube away from the gastric tissue. Changing the patient's position may help gastric fluid pool in a location that is accessed by the tube</li> <li>• If results are inconclusive, discuss need for x-ray with MRP</li> </ul> | pH  | Indication | Less than 6 | For the majority of children, pH of gastric aspirates will be less than 4.<br>Neonates have been documented to have pH less than 5. | Greater than 6 | Likely to have their gastric tube placed in the duodenum or respiratory system and should have their gastric tube assessed before attempting to feed. Refer to the <a href="#">NG Tube Placement Algorithm</a> and to <a href="#">Example of Gastric Content Images</a> .<br><br>NOTE: Some children on acid-suppressing medication, those recently fed, or being continuously fed may have a gastric pH of greater than 6. | <ul style="list-style-type: none"> <li>• X-ray (Long Chest)</li> <li>• Verify tube placement by measuring external length measuring from the nare to the end of the tube below the hub (see image below)</li> </ul>  <ul style="list-style-type: none"> <li>• Checking NJ tube placement using pH is NOT to be used as this can cause tube collapse or migration</li> </ul> |
| pH   | Indication   |   |            |             |   |                |   |   |
| Less than 6  | For the majority of children, pH of gastric aspirates will be less than 4.<br>Neonates have been documented to have pH less than 5.  |   |            |             |   |                |   |   |
| Greater than 6                                     | Likely to have their gastric tube placed in the duodenum or respiratory system and should have their gastric tube assessed before attempting to feed. Refer to the <a href="#">NG Tube Placement Algorithm</a> and to <a href="#">Example of Gastric Content Images</a> .<br><br>NOTE: Some children on acid-suppressing medication, those recently fed, or being continuously fed may have a gastric pH of greater than 6.  |   |            |             |   |                |   |   |
| <b>Frequency of Checking Placement and Patency</b> | <ul style="list-style-type: none"> <li>• Check placement: <ul style="list-style-type: none"> <li>○ Every 8 hours when: <ul style="list-style-type: none"> <li>▪ Receiving continuous feeding</li> <li>▪ Receiving continuous gastric drainage/decompression</li> <li>▪ NPO</li> </ul> </li> <li>○ Prior to any liquid/feed/medications</li> <li>○ At change or cleaning of enteral feeding sets</li> </ul> </li> <li>• Flush tube every 8 hours at minimum to maintain patency</li> </ul>  | <ul style="list-style-type: none"> <li>• Check placement: <ul style="list-style-type: none"> <li>○ Every 4 hours when: <ul style="list-style-type: none"> <li>▪ Receiving continuous feeding</li> <li>▪ NPO</li> </ul> </li> <li>○ Prior to any liquid/feed/medications</li> <li>○ At change or cleaning of enteral feeding sets</li> </ul> </li> <li>• Flush tube every 4 hours at minimum to maintain patency due to the tendency of NJ tube blockages</li> </ul> |            |             |   |                |   |   |

#### 4.5 Procedures for Maintenance

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- During feeds assess patient’s respiratory status, position of tube, and tolerance of feed.
- Notify the MRP (or delegate) if there are any signs or symptoms of aspiration or feeding intolerance.
- Increase monitoring based on individual patient’s clinical status/risk for aspiration. Refer [Electronic Patient Monitoring](#) policy for additional monitoring guidelines.
- Engage patient and family caregiver in procedure to encourage capacity building and discharge preparedness, when required.

| Patient Criteria  | Maintenance   |
|---|---|
| <b>A Patient with a Naso/Orogastric or Nasojejunal Tube</b> | <ul style="list-style-type: none"> <li>• Assess skin integrity every shift               <ul style="list-style-type: none"> <li>○ Refer to <a href="#">Risk Assessment, Prevention and Management of Pressure Injuries</a></li> </ul> </li> <li>• Assess patency of nares daily</li> <li>• Perform mouth care daily, or as per departmental guidelines</li> </ul>   |
| <b>A Patient with a Nasal Bridle</b>                        | <ul style="list-style-type: none"> <li>• Assess skin integrity every shift               <ul style="list-style-type: none"> <li>○ Refer to <a href="#">Risk Assessment, Prevention and Management of Pressure Injuries</a></li> <li>○ Perform daily assessment and cleaning every shift</li> <li>○ Check that the clip is not causing any pressure to the underlying skin</li> <li>○ Inspect the skin around the nostrils for any signs of redness, sores, or pain</li> <li>○ Apply a non-sting skin barrier as needed to skin areas between the bottom of the nose and top of the upper lip</li> </ul> </li> <li>• Check securement of Nasal Bridle with hourly checks               <ul style="list-style-type: none"> <li>○ Check the nasal bridle tubing and clip to ensure it is secure</li> </ul> </li> <li>• Cleaning the Nasal Bridle daily and PRN when visually soiled               <ul style="list-style-type: none"> <li>○ Clean the parts of the bridle you can see with mild soap and water</li> </ul> </li> <li>• Assess patency of nares daily</li> <li>• Follow further guidance for NJ tube care as per hospital policy</li> </ul> |

#### 4.6 Procedures for Removal

- A medical order is required for the removal of a NG/OG/NJ
- Removal of a Nasal Bridle is outlined in [Quick Reference Guide for AMT Bridle Pro](#)

#### 5.0 Related Documents

[Hand Hygiene and Hand Care](#)

[Routine Practices](#)

[Patient Care Documentation](#)

[Enteral Feeding](#)

[Risk Assessment, Prevention and Management of Pressure Injuries](#)

[Unblocking Enteral Feeding Tubes Using Activated Pancreatic Enzymes](#)

[Example of Gastric Content Images](#)

[NG Tube Measurement Image](#)

[NG Tube Placement Algorithm](#)

[Connected Care Guidelines for Transition to Home and Community Care: Nasogastric \(NG\) tubes at home](#)

[Pain Management](#)

[Comfort Positioning Guide](#)

#### 6.0 References

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**Attachments:**

[Examples of Gastric Contents.docx](#)

[Infant NG Size Selection Guideline.docx](#)

[NG Tube Insertion - Standard Work .pdf](#)

[NG Tube Insertion Standard Work Regular Draft 2023.docx](#)

[NG tube measurement.png](#)

[NG tube placement Algorithm.pdf](#)

[OG Tube Insertion - Standard Work .pdf](#)

[OG Tube Insertion Standard Work Regular Draft 2023.docx](#)

[Quick Reference Guide for the AMT Bridle Pro.docx](#)

[Quick Reference Guide for the AMT Bridle Pro.pdf](#)

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